

### **ABSTRACT OF THE INVENTION**

Crystalline polymorphous forms of the rifaximin (INN) antibiotic named rifaximin  $\alpha$  and rifaximin  $\beta$ , and a poorly crystalline form named rifaximin  $\gamma$  have been discovered. These forms are useful in the production of medicinal preparations for oral and topical use and can be obtained by means of a crystallization process carried out by hot-dissolving the raw rifaximin in ethyl alcohol and by causing the crystallization of the product by the addition of water at a determinate temperature and for a determinate period of time. The crystallization is followed by drying carried out under controlled conditions until a specific water content is reached in the end product.